

T Level Technical Qualification in Digital Support Services

Occupational specialism assessment (OSA)

Digital Support

Assignment 1

Assignment Brief

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Assignment brief

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About this assignment

Introduction

This assignment is set by NCFE and administered by your provider during a set 2 week window.

The assignment will be completed under supervised conditions.

You must complete all tasks in this assignment independently. You are required to sign a declaration of authenticity to confirm that the work is your own. This is to ensure authenticity and to prevent potential malpractice and maladministration. If any evidence was found not to be your own work, it could impact your overall grade.

Internet access is only allowed for task 2. Internet access is available for this task to allow you to install, configure and update operating system and software applications. You are **not** permitted to use the internet for any other purpose, such as research. A copy of your browsing history must be submitted as part of your evidence for this task.

Your provider will provide the licensed software necessary for the tasks.

You have 19 hours to complete all tasks within this assignment. Each task has the following number of hours:

Task 1

8 hours (this task will be spread over 2 days – one day for task 1(a) and one day for task 1(b)).

Task 2

11 hours (this will be provided after completion of task 1. This task will be spread over 3 days. There may be significant periods of time whilst waiting for installations to take place and therefore task 2(a), 2(b) and 2(c) may be completed in parallel).

Individual tasks must be completed within the timescales stated within each task, but it is up to you how long you spend on each part of the task, therefore be careful to manage your time appropriately.

Marks available across all assignment 1 tasks: 76.

Details on the marks available are provided in each task.

You should attempt to complete all of the tasks.

Read the instructions provided carefully.

Take all photographs using the digital camera supplied by your provider. Use of personal mobile phones is **not** permitted.

Performance outcomes

Marks will be awarded against the skills and knowledge performance outcomes:

PO1: Apply procedures and controls to maintain the digital security of an organisation and its data

PO2: Install, configure and support software applications and operating systems

PO3: Discover, evaluate and apply reliable sources of knowledge

Scenario

A warehousing company was established 12 months ago. They have seen great growth in supplying a range of cleaning products. They have contracted you as a digital specialist.

The company wants you to plan and support a future network. They currently have no business control techniques in place because they were a home-based company until recently.

They need to know how to operate their data systems effectively, appropriately, and securely.

The company also needs your immediate support with preparing and installing a smaller network of computers and a mobile device for the employees in the company.

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Task 1: prepare for installation

Time limit

8 hours

Task 1(a) must be completed prior to starting task 1(b).

Task 1(a) is allocated 3 hours 30 minutes.

Task 1(b) is allocated 4 hours 30 minutes.

You can use the time how you want but each task must be completed within the time limit.

(20 marks)

Student instructions

Based on the scenario, you must complete the relevant preparation so that you can set up 100 client devices (80 computers and 20 mobile devices), switches, wireless access points, a server and 5 colour printers. You also need to suggest software for the client in the future. The network needs to be set up within a 2 week period, so that all employees can use their devices again as quickly as possible.

You must:

1(a) Prepare a report to explain the security needed for the installation, configuration and support of end user services. These must ensure confidentiality, integrity and availability. Your report must include:

- suitable recommendations on implementing business control techniques within the workplace (physical and administrative)
- explanations on how the client should operate the new data systems effectively, appropriately and securely, in accordance with General Data Protection Regulation (GDPR) / Data Protection Act (DPA) 2018) and its principles

(8 marks)

1(b) Plan and complete the relevant network planning documentation:

- health and safety risk assessment for the work to be undertaken (worksheet in appendix 1)
- network planning, including:
 - timescales
 - network design, including IP addressing scheme
 - inventory log (worksheet in appendix 1)
- security risk assessment for the work to be undertaken (worksheet in appendix 1), according to ISO 27001:2017 principles.

(12 marks)

You will have access to the following equipment:

- a computer with office software pre-installed

Evidence required for submission to NCFE

The following evidence should be submitted:

- summary of all business controls documentation required (Word processing document)
- summary of how to secure data systems effectively
- health and safety risk assessment (worksheet in appendix 1)
- network planning documentation including timescales and network design (Word processing document)
- inventory log (worksheet in appendix 1)
- security risk assessment (worksheet in appendix 1)

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Task 2: install and configure a small network

Time limit

11 hours

You can use this time how you want but all parts of task 2 must be completed within the time limit.

(56 marks)

Student instructions

The client has asked you to install a small new network, against a set of requirements. These devices can be either virtual, physical or emulator.

All employees will use the computers centrally in the office. Off-site employees will use a mobile device (for example, a laptop, tablet or phone) so they can work remotely via the approved solution.

The computers need to be set-up with the appropriate software. This will allow the employees to email, write letters to suppliers, update financial spreadsheets and create weekly presentations.

In your evidence document, you will need to provide annotated screenshots for the processes you follow, the implementations you make and any explanations for all the key decisions you make.

The computers will also need to access the internet and have instant messaging / video conferencing software such as GoToMeeting, Zoom or Teams. Employees will require access to project management software to help them plan upcoming projects.

The client wants to ensure there is suitable software installed to mitigate any vulnerabilities to the system, including suitable back-up security controls in place.

The client has also asked you to make notes detailing the software installations that took place. This is for their IT staff to use in the future. Your final task is therefore to create a useable document that explains the set-up of your system.

You will have access to the following:

- 3 computers with full administrator rights, or virtual / emulator machine and software
- internet
- operating system
- word processing, presentation, and spreadsheet software
- email software
- instant messaging software
- project management software
- mobile device or emulator
- IP address allocations for task 2 in line with provider's own network IP addressing schema
- digital camera
- access to your completed appendix 1 workbook from Task 1.

2(a) The warehousing company, were home-based until recently and now require a smaller network of computers and a mobile device for the employees in the company to be created. It has to be able to support both on-site employees who'll access the computer system centrally in the office but also off-site employees who will need to access it remotely via mobile devices.

You must install, configure and support a small-scale network. This should include a server, 2 workstations and one mobile device via WiFi. The workstations will be used by employees who work in the processing department and have to work in-office to process client orders and details. Whilst the mobile device will be utilised by a delivery driver who needs access to key delivery information from the system whilst completing their duties.

The user details for the employees are as follows:

	Name	Job Role	Department
User 1	R. Riezer	Customer Support Assistance	Processing
User 2	S. Cooper	Order Processor	Processing
User 3	J. Currin	Delivery Driver	Processing

You also need to give evidence to show you completed the following actions:

- you implemented physical network and network security measures to prevent the unauthorised access, misuse, modification or denial of a computer, information system or data (CIA and IAAA)
- you installed Windows server and created active directory, setting up necessary user accounts and groups
- you arranged software licence management (software install log within appendix 1)

You should refer to the IP addressing schema you were given by your provider.

Note: In your evidence document, you will need to provide annotated screenshots for the processes you follow, the implementations you make and any explanations for all the key decisions you make. As you do the various tasks, you need to log all the network security measures that have been taken. You must log any software installations you have planned. You must also describe how software licences will be managed in the installation and configuration log (security risk assessment and software install log worksheets in appendix 1).

(18 marks)

Evidence required for submission to NCFE

The following evidence should be submitted:

- annotated screenshots (if using virtual machines) or photographs (if using physical machines/devices) showing the setup and successful implementation of the network and server / active directory installation.

2(b) Provide evidence of the following for the client:

- installing and setting up an operating system and anti-virus software
- joining computer to active directory domain
- installing and configuring application software suitable for the client
- implementing back up security controls
- installing / updating device drivers

Whilst waiting for the installation to take place, set-up and configure a WiFi mobile device for network connectivity:

- configure a mobile device to include device lock security measures, mobile locator application and back up
- carry out all necessary mobile device updates including anti-virus

Note: You will need to provide annotated screenshots / photographs for the processes you follow and any implementations you make. You will need to complete the software installation log (worksheet in appendix 1) and justify your decisions. You will need to show evidence of any drivers that need installing. You will also need to take screenshots of device manager. When updating any software / OS updates, you must give evidence that these are the only updates needed on the system. The installation may take some time to complete and therefore you should continue with task 2(c).

(22 marks)

Evidence required for submission to NCFE

The following evidence should be submitted:

- screenshots (if using virtual machines) or photographs (if using physical machines/devices) showing the setup and successful implementation of software, device driver status and mobile devices.

2(c) Review the installation and configuration notes and log (started in task 1) that report the following information to the client, making sure it is up to date and correct:

- record of all operating system / software application installations and utilities, upgrades, uninstalls and any major configuration changes
- identify and explain any vulnerabilities detected in the current system set-up / network
- recommend actions to mitigate any vulnerabilities found

Note: You will have been filling in the installation and configuration log as you have been completing the task. You will need to review what you have done, ensure that all information contained is correct and identify the vulnerabilities and mitigations required.

Apply your communication skills appropriately, using standard English. Use accurate spelling, punctuation, and grammar. Consider your target audience.

(16 marks)

Evidence required for submission to NCFE

The following evidence should be submitted:

- completed installation and configuration log (worksheet in appendix 1)

Document information

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